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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,452	08/05/2003	Helmut Winnacker	WINNACKER - 2 (CIP)	6713
25889	7590	01/17/2006	EXAMINER	
WILLIAM COLLARD COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			JENKINS, KIMBERLY YVETTE	
			ART UNIT	PAPER NUMBER
			2635	

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/634,452

Applicant(s)

WINNACKER, HELMUT

Examiner

Kimberly Jenkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-8 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/5/03 & 12/5/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 4 is objected to because of the following informalities: lines 8 and 15 of claim 4 have a punctuation error of a misplaced comma "has  $\perp$  downstream from...".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 2 and 7 recite the limitation " the compression spring" in lines 1-2 of claims 2 and 7. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 3 recites the limitation " the bypass opening" and "the control piston" in line 2. There is insufficient antecedent basis for this limitation in the claim.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1-5 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated over Russell et al. (US 4535429).

Regarding claim 1, Russell, who teaches an apparatus for signaling within a borehole while drilling expressively discloses a device unit that is coupled to transmitter 1 for transmitting from a borehole through the drilling fluid signals characteristics of measured data obtained while drilling the borehole wherein the hydro-mechanical signal transmitter 1 is responsive to signal characteristics to the measured data for generating in the drilling fluid a coded series of pressure pulses of the measured data (col. 2, lines 31-43). Additionally, Russell discloses a flow regulator 4 (read as flow constrictor, col. 2, line 52-58) for controlling the current of drilling fluid directed to the signal transmitter 1 in response to a pressure differential generated by restricting the current of drilling signals characteristic to the series of pressure pulses

fluid entering the device so that the current of drilling fluid directed to the signal transmitter is automatically adjusted to flow values optimal for the generation of significant pressure pulses (col. 4, lines 33-38).

Regarding claim 2, Russell discloses the compression spring 89 (col. 4, line 67-col. 5, line 2).

Regarding claim 3, Russell expressively discloses the opening of a bypass opening as increasing as the travel of the control piston 60 increases (col. 3, line 47-col. 4, line 13).

Regarding claim 4, Russell discloses a device that is coupled to transmitter 1 for transmitting from a borehole through the drilling fluid to the earth's surface signals characteristic of measured data obtained while drilling (col. 2, lines 31-39). Additionally, Russell discloses an elongated housing 10 (read as elongated casing), which is adapted for insertion in the drilling fluid conduit, which is inherently disclosed in col. 2, lines 39-43 that the fluid (mud) travels through the drill string via conduit. Moreover, Russell discloses a sealing ring 16 (read as Vilton diaphragm) against the drill string (col. 2, lines 61-67). The hydro-mechanical transmitter 1 is arranged in the elongated housing 10 downstream from the opening 2 (read as duct), which is a passageway for connecting the central housing conduit with drilling fluid conduit of the drill string, which controls a closure element by means of which the passageway is

adapted to be throttled via a throttling member 12 (col. 2, lines 52-67). Also, Russell discloses the elongated housing 10 as accommodating a flow regulator 4 having a control piston 60 (col. 3, lines 47-55, which controls the current of drilling fluid through the bypass opening 2 in response to pressure differentials generated at the entrance opening and to force a spring 89, in such a manner that the drilling fluid current, which is fed by the signal transmitter 1 is maintained at flow values optimal for the generation of significant pressure pulses (col. 4, lines 33-49).

Regarding claim 5, Russell discloses the aforementioned control piston 60 comprising a throttling section 12 for controlling the cross-section of passage of the bypass opening, and a measuring section serving as a pressure sensor (pressure transducer, col. 1, lines 24-28) and the throttling section 12 and the measuring section are interconnected by a tappet (valve), which controls the main flow of fluid (col. 1, lines 34-53).

Claim 7 is rejected for the same reasoning as claim 2.

Claim 8 is rejected for the same reasoning as claim 3.

*Allowable Subject Matter*

5. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

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claim and any intervening claims, because prior art of record does not disclose a logging apparatus comprising a chamber that is divided into two compartments by the measuring section, whereof the first compartment, which is located at the end of the measuring section remote from the tappet, is connected to the drilling fluid conduit of the drill string, and whereof the second compartment, through which the tappet extends, is connected to the housing conduit, through which the tappet is passed, and receives therein a compression spring bearing against the measuring section with a spring force.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Jenkins whose telephone number is 571.272.3064. The examiner can normally be reached from Monday-Friday between the hours of 7am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571.272.3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly Jenkins  
Examiner  
Art Unit 2635  
23 December 2005

KY

MICHAEL HORABIK  
SUPERVISORY PATENT EXAMINER  
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